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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,280	07/14/2003	James F. Rieke	H063070003	7461

37462 7590 06/29/2006

LOWRIE, LANDO & ANASTASI  
RIVERFRONT OFFICE  
ONE MAIN STREET, ELEVENTH FLOOR  
CAMBRIDGE, MA 02142

EXAMINER
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WEIER, ANTHONY J

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/619,280

Applicant(s)

RIEKE ET AL.

Examiner

Anthony Weier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group III (claims 11-14) in the reply filed on 4/13/06 is acknowledged. Applicant referred to a 4/10/06 filing of a previous election with traverse, but no such paper is present in the application. No reasons for traversal were provided in the current reply filed 4/13/06. In any event, the traversal is not persuasive in view of the reasons set forth in the Restriction Requirement.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by de Nevers.

De Nevers discloses a system comprising a heat exchange device wherein said device includes a spiral-shaped element therein in a tube where heating takes place, said system further having a processing facility comprising a material handling element (e.g. feed bin 40), said system being capable of processing a biomaterial stream.

4. Claims 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 4300011, WO 98/04879, GB 424236, Welledits, JP 11-90401, or FR 2608380.

DE 4300011 discloses a system comprising a heat exchange device (wärmetauscher) wherein said device includes a spiral-shaped element therein in a tube where heating takes place, said system further having a processing facility comprising a material handling element (e.g. entrance to device), said system being used to preheat granular material and therefore capable of processing a biomaterial stream. DE 4300011 also discloses embodiments wherein the spiral-shaped element takes up less than 50% of the width within the tube (see Figure 5).

FR 2608380 discloses a system comprising a heat exchange device wherein said device includes a spiral-shaped element therein in a tube where heating takes place, said system further having a processing facility comprising a material handling element (6a), said system being used to preheat granular material and therefore capable of processing a biomaterial stream. FR 2608380 also discloses said spiral-shaped element taking up just less than 50% of the width within the tube (see Figure 1).

WO 98/04879 discloses a system comprising a heat exchange device wherein said device includes a spiral-shaped element therein in a tube where heating takes place, said system further having a processing facility comprising a material handling element (hopper area prior to outlet 9), said system being used to granular material and therefore capable of processing a biomaterial stream. WO 98/04879 also discloses said spiral-shaped element taking up just less than 50% of the width within the tube (e.g. see section 11e).

Welledits discloses a system comprising a heat exchange device within a circular housing or tube (4) wherein said device includes a spiral-shaped element

therein where heating takes place, said system further having a processing facility comprising a material handling element (pump and transfer tube; 20, 22) and, inherently, a fermentation unit, said system being used to heat biomaterial (beer mash). Welledits also discloses said spiral-shaped element taking up less than 50% of the width within the tube housing (see Figure 3).

JP 11-90401 discloses a system comprising a heating device wherein said device includes a spiral-shaped element therein in a tube where heating takes place, said system further having a processing facility comprising at least a material handling element (3a), said system being used to heat provide fermentation of biomaterial. JP 11-90401 also discloses said spiral-shaped element taking up just less than 50% of the width within the tube (see Figure 3).

GB 424236 discloses a system comprising a heat exchange device wherein said device includes a spiral-shaped element therein in a tube where heating takes place, said system further having a processing facility comprising a material handling element (5), said system being used to heat granular material and therefore capable of processing a biomaterial stream. GB 424236 also discloses said spiral-shaped element taking up just less than 50% of the width within the tube (see Figure 1).

5. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Mehta et al (heat transfer and Frictional Characteristics of Spirally Enhanced Tubes for Horizontal Condensers).

Mehta et al discloses a system comprising a heat exchange device wherein said device includes a spiral-shaped element in a tube where heating takes place wherein

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said spiral-shaped element taking up less than 50% of the width within the tube (see Figure 1), said system being used to heat a flowing material and therefore capable of processing a biomaterial stream.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Weier whose telephone number is 571-272-1409. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

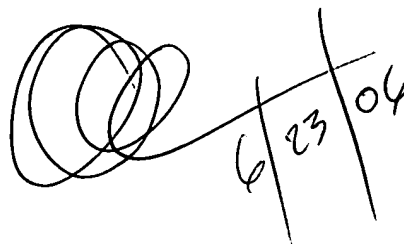
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Anthony Weier  
Primary Examiner  
Art Unit 1761

Anthony Weier  
June 23, 2006

A handwritten signature consisting of several overlapping loops, followed by a vertical line and the date "6/23/06".

6/23/06